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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Bernard Paul

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23505

7590

01/26/2010

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EXAMINER

WARE, DEBORAH K

ART UNIT

PAPER NUMBER

1651

NOTIFICATION DATE

DELIVERY MODE

01/26/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pathou@conleyrose.com

Office Action Summary	Application No.	Applicant(s)	
	10/520,294	PAUL, BERNARD	
	Examiner	Art Unit	
	DEBBIE K. WARE	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4 and 16-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1, 3-4, and 16-22 are presented for reconsideration on the merits.

Response to Amendment

The Declaration and Amendment filed October 2, 2009, have been received and entered. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. The Declaration overcomes the 35 USC 112, first paragraph issue and, therefore, this rejection has been overcome and is removed.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3-4 and 16-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims are rejected for the usage of "consisting essentially of" in the claims because the phrase is not supported by the original disclosure and one of skill in the art can not determine what is omitted from the mixture.

The phrase is not used in the original disclosure and Applicants have not provided in the original disclosure any support for which to define the phrase for purposes of making it clear in the claims by clearly defining it in the specification what is

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regarded as constituting a material change in the basic and novel characteristics of the claimed invention. There is not clear indication in the specification or claims of what the basic and novel characteristics are to include or exclude. Therefore, the phrase is non-enabling and Applicants have only support for the term “comprising”. It is suggested to change the phrase back to –comprising--.

Claim Rejections - 35 USC § 112, 2nd

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-4 and 16-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims are rendered vague and indefinite because of the usage of “consisting essentially of” because it is not supported by the specification and the metes and bounds of the claims can not be determined. Also the alternative usage of plural and singular terms of “bacteria”, “bacterium”, “yeast” and “yeasts” is confusing and it is suggested to use consistent terms throughout the claims. The claims are rendered grammatically indefinite, therefore.

Also claim 3, is vague and indefinite for failing to recite a proper Markush Group because it is unclear what other components are intended to be comprised by the Group which is intended to represent a closed group of components or members. It is further suggested to remove the parentheses from around the accession numbers used

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in the claims. Applicants' Representative may phone the Examiner for suggestions if she desires.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4, 20 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 94/19950 (aka: WO), cited on PTO-1449 Form of record.

Claims are drawn to methods for biocontrol of cryptogamic vine disease (e.g. Botrytis fungal pathogen) comprising applying to a vine having the disease a mixture containing at least one bacterium and at least one yeast and an inert vehicle wherein the bacterium is selected from *Bacillus subtilis* and the yeast is selected from *Pichia* genus.

WO teaches methods for biocontrol of cryptogamic vine disease (p. 9, line 9, e.g. Botrytis fungal pathogen) comprising applying to a vine having the disease a mixture containing at least one bacterium and at least one yeast (see abstract, p. 5, lines 15-32) and an inert vehicle (p. 4, lines 25-31; p. 5, line 23; p. 8, lines 24-32 and p. 9, lines 1-21) wherein the bacterium can be selected from *Bacillus subtilis* (p. 3, line 16) and the yeast is selected from *Pichia* genus (p. 3, line 9; p. 5, line 30). Botrytis is disclosed at p. 9, line 9, which is a mold that effects aerial surfaces, which includes the vine of crop

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plants, including fruit, or their products. Mangoes are disclosed to be treated at p. 10, line 27; and grapes of Cabernet variety at p. 11, line 27.

The claims are identical to the cited disclosure and are, therefore, considered to be anticipated by the teachings therein. Each of the claimed features are disclosed and the bacteria is capable of being selected from *Bacillus subtilis* as the reference clearly teach *Bacillus subtilis* is useful, see p. 3, lines 15-17, for biocontrol of fruit rot which is caused by *Botrytis* fungal pathogen (note USP 5047239 disclosed by cited reference at line 15 on p. 3), a pathogen of cryptogamic vine disease. Therefore, the claims are anticipated by the teachings of the cited reference and each claimed feature is disclosed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-4, and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO, discussed above, in view of Bruneteau et al, da Luz and Shanmuganathan, the latter two citations newly cited on enclosed PTO-892 Form.

Claims are further drawn to methods for biocontrolling a cryptogamic vine disease comprising *Bacillus megaterium*, *Debaryomyces*, specific concentrations of yeast and bacterium and application by spraying.

Bruneteau et al teach sphingolipids effective for treating cryptogamic vine disease (e.g. *Botrytis* fungal pathogen) on tomato. Further, disclosed is that the sphingolipids are derived from at least one yeast isolate and at least one bacterium, note col. 4, lines 39-45 and col. 5, lines 47 and 53; and col. 6, line 19. Furthermore, the application of the composition can be by spraying.

WO teaches methods for biocontrol of cryptogamic vine disease (p. 9, line 9, e.g. *Botrytis* fungal pathogen) comprising applying to a vine having the disease a mixture containing at least one bacterium and at least one yeast (see abstract, p. 5, lines 15-32) and an inert vehicle (p. 4, lines 25-31; p. 5, line 23; p. 8, lines 24-32 and p. 9, lines 1-21) wherein the bacterium can be selected from *Bacillus subtilis* (p. 3, line 16) and the yeast is selected from *Pichia* genus (p. 3, line 9; p. 5, line 30). *Botrytis* is disclosed at p. 9, line 9, which is a mold that effects aerial surfaces, which includes the vine of crop plants, including fruit, or their products. Mangoes are disclosed to be treated at p. 10, line 27; and grapes of Cabernet variety at p. 11, line 27.

da Luz teach biocontrol of fungal pathogens of crops using *Bacillus megaterium*, see abstract, all lines.

Shanmuganathan teach biocontrol of fungal pathogens of crops using *Debaryomyces* yeast, note col. 2, line 15.

The claims differ from Bruneteau in that a mixture of bacterium and yeast isolate(s), specific concentrations and ratio thereof, and particular genera thereof are not disclosed.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to replace the sphingolipids of Bruneteau et al with the yeast and bacterium mixture in a concentration and ratio, thereof disclosed by WO; and further selecting from *Bacillus megaterium* and Shanmuganathan, as disclosed by da Luz and Shanmuganathan, for use in the mixture and spraying to biologically control a cryptogamic vine disease for crops such as tomato, grape vine and other fruits of the vine. Each of the cited references teach the claimed features and each of da Luz and Shanmuganathan teach biocontrol of fungal pathogens using the *B. megaterium* species and *Dabaryomyce* yeast. Thus, to select isolated strains thereof for the same purpose and intended use is prima facie obvious over the cited prior art. Applicants have shown no difference between the strains of the cited prior art and those claimed herein. In the absence of a side by side comparison these claims to the strains are rendered prima facie obvious.

Also to select particular concentrations is clearly within the skill of an ordinary artisan because WO teaches at page 11, line 23, the 10^{10} concentrations of yeast and

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bacteria as disclosed are very close to the concentrations optionally required by the claimed method. Also a one to one mixture clearly suggests an equal mixture of yeast and bacteria, thus, a 50/50 ratio is suggested and would have been expected to provide successful results for a mixture of bacteria and yeasts. Botrytis is clearly disclosed, and a method for treating cryptogamic vine disease is clearly taught as well. One of skill in the art would have been motivated to select for these bacteria and yeasts for which to provide in a mixture with a carrier (e.g. inert carrier) to treat the disease. In the absence of unexpected successful results the claims are rendered prima facie obvious.

All claims fail to be patentably distinguishable over the state of the art discussed above and cited on the enclosed, as well as previously enclosed, PTO-892 and/or PTO-1449. Therefore, the claims are properly rejected.

The remaining references listed on the previously enclosed PTO-892 and/or PTO-1449 are cited to further show the state of the art.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEBBIE K. WARE whose telephone number is (571)272-0924. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DKW/

Deborah K. Ware

Examiner

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/David M. Naff/

Primary Examiner, Art Unit 1657